

COFDM DEMODULATOR WITH FFT ANALYSIS WINDOW DISPLACEMENT
COMPENSATION

Abstract

A COFDM demodulator including a fast Fourier (14) transform circuit analyzing a received signal in a window corresponding to one symbol, each symbol carrying several phase and amplitude modulated carriers, some of which (P), shifted in frequency in a predetermined way from one symbol to the next one, form pilots; a bidimensional filter (18) for interpolating, from anchors (A) corresponding to the pilots such as received from several consecutive symbols (S), the distortion undergone by each carrier; and means (12) for correcting the shifting of the window with respect to an optimal position. The demodulator includes means (42) for correcting each distortion according to window shifting corrections performed respectively for the symbol associated with the distortion and for the symbols associated with the anchors used to interpolate the distortion.

Figure 8.